

WHAT IS CLAIMED IS:

1. A communications system comprising:
a switch for accepting incoming calls;
5 a plurality of telephony access nodes for terminating said incoming calls;
a distributed redirect server hosted on each of said plurality of telephony access nodes; and
a load balancing unit for directing said incoming calls from said switch to one of the plurality of telephony access nodes, said plurality of telephony access nodes being connected to a back end cluster.
- 15 2. A communications system according to claim 1 wherein the distributed redirect server determines whether one of said plurality of telephony access nodes has sufficient resources to terminate one of said incoming calls.
- 20 3. A communications system according to claim 1 wherein the connection between the plurality of telephony access nodes and the cluster of back end nodes uses Internet Protocol.
- 25 4. A method of terminating a call in a communications system, said communications system comprising a switch, a plurality of telephony access nodes, a distributed redirect server, and a load balancing unit, the method comprising the steps of:
30 generating an incoming call at said switch;
directing said incoming call from said switch via said load balancing unit to said distributed redirect server for termination at one of said telephony access nodes;
- 35 verifying, at said distributed redirect server, whether said one telephony access node has sufficient

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resources to answer said incoming call; and terminating said incoming call at said one telephony access node.

- 5 5: A method of terminating a call in a communications system, said communications system comprising a switch, a plurality of telephony access nodes, a distributed redirect server, and a load balancing unit, the method comprising the steps of:
- 10 generating an incoming call at said switch;
- directing said incoming call from said load balancing unit to said distributed redirect server for termination at a first one of said telephony access nodes;
- 15 verifying, at said distributed redirect server, whether said first telephony access node has sufficient resources to answer said incoming call;
- determining whether a second one of said telephony access nodes has sufficient resources to answer said incoming call when said step of verifying has concluded that said first telephony access node does not have sufficient resources to answer said incoming call;
- 20 sending a message from said second telephony access node to said switch indicating the ability of said second telephony access node to terminate said incoming call;
- 25 sending a message from said switch directly to the distributed redirect server associated with said second telephony access node; and
- 30 terminating said incoming call at said second telephony access node.
6. A method according to claim 5 wherein, prior to said determining step, a status of each of said

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telephony access nodes is multicast to the others of said telephony access nodes.

7. A method according to claim 5 wherein said step
5 of determining comprises a step of consulting a resource availability status map which indicates the status of each of said telephony access nodes.

8. A method according to claim 7 wherein said
10 resource availability status map is compiled based on Internet Protocol multicast messages sent by each one of said plurality of telephony access nodes.

9. A method according to claim 7 wherein each one
15 of said telephony access nodes has a status of either Free or Idle.

10. A method according to claim 7 wherein said
resource availability status map is maintained at each
20 of said telephony access nodes.

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